

# SERVICE MANUAL

Ver.4-2005K

## Revision History

<b>J</b>	VGN-FS52B
	VGN-FS22B
	VGN-FS32B
	VGN-FS22VB
	VGN-FS92S
	VGN-FS92PS *
	VGN-FS92S *
<b>AM</b>	VGN-FS780
	VGN-FS760
	VGN-FS740
	VGN-FS720
	VGN-FS775P
	VGN-FS745P
	VGN-FS770
	VGN-FS750P
	VGN-FS730
	VGN-FS715
	VGN-FS742
	VGN-FS710
	VGN-FS770FG

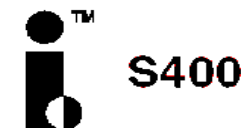
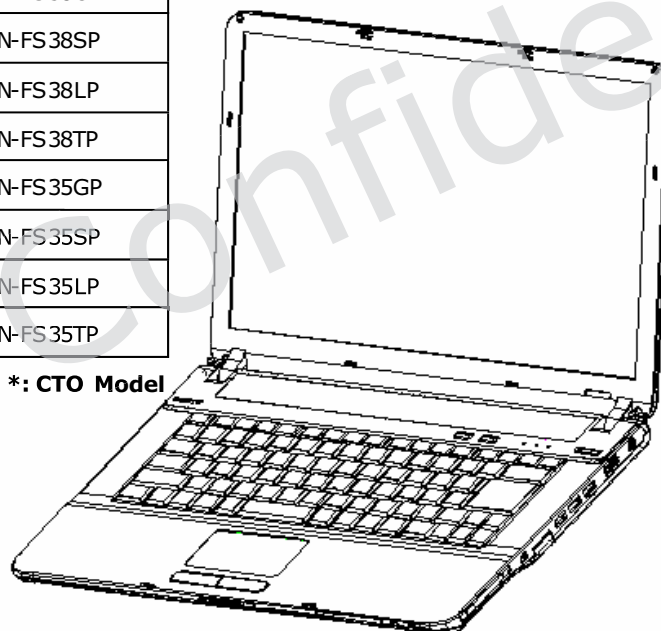
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<b>AM</b>	VGN-FS750F
	VGN-FS730F
	VGN-FS715F
	VGN-FS755FP
	VGN-FS740FP
	VGN-FS710FP
	VGN-FS760Q
	VGN-FS740Q
<b>EU</b>	VGN-FS790P *
	VGN-FS790B *
	VGN-FS790 *
	VGN-FS790BH *
	VGN-FS315Z
	VGN-FS395VP
	VGN-FS315M
	VGN-FS315B
	VGN-FS315E
	VGN-FS315SR
	VGN-FS315MR
	VGN-FS315H

<b>EU</b>	VGN-FS315S
<b>AO</b>	VGN-FS38C
	VGN-FS35C
	VGN-FS38GP
	VGN-FS38SP
	VGN-FS38LP
	VGN-FS38TP
	VGN-FS35GP
	VGN-FS35SP
	VGN-FS35LP
	VGN-FS35TP

\*: CTO Model



- Design and specifications are subject to change without notice.

PERSONAL COMPUTER

SONY®

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#### **Caution Markings for Lithium/Ion Battery-**

The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the Manufacturer's

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100°C (212°F) or incinerate. Dispose of used battery promptly. Keep Away from children..

CAUTION: Changing the back up battery.

- Overcharging, short circuiting, reverse charging, mutilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
- If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection..

## **Service and Inspection Precautions**

### **\*1. Obey precautionary markings and instructions**

\* Labels and stamps on the cabinet, chassis, and components are as requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents..

### **\*2. Use designated parts only**

\* The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages.

- Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions be extra sure to use only the designated components.

### **\*3. Always follow the original design when mounting parts and routing wires**

\* The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it

away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

### **4. Inspect after completing service**

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

### **5. When replacing chip components..**

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.,

### **6. When handling flexible print boards..**

- The temperature of the soldering-iron tip should be about 270°C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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History of the changes is shown as the  
"Revision History" at the end of this data.

# CHAPTER1. SPECIFICATIONS

## 1-1. Specifications

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	VGN-FS52B	VGN-FS22B	VGN-FS32B	VGN-FS22VB	VGN-FS92S	VGN-F992P*F992S*
CPU	Pentium-M 750(Do1.86)	Celeron-M 360(Do1.4)	Celeron-M 370(Do1.5)	Celeron-M 360(Do1.4)	Celeron-M 360(Do1.4)	*1)
Graphic	915GM	910GML	910GML	910GML	910GML	*2)
LCD	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	*3)
HDD	100GB	80GB	100GB	80GB	40GB	*4)
MEMORY(Slot1)	512MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	*5)
MEMORY(Slot2)	-	-	-	-	256MB DDR333	
QUANTITY(STANDARD)	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	
OPT-DRIVE	Super Multi Drive +/- DL	Super Multi Drive DL	Super Multi Drive DL	Super Multi Drive DL	Combo	Super Multi Drive +/- DL/Combo/DVD -ROM
AC adaptor	AC19V11	AC19V11	AC19V11	AC19V9	AC19V11	AC19V11
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O/X
Memory Card Adapter	O	O	O	O	O	O
USB FLOPPY DISK DRIVE	O	X	O	X	X	X
OS	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home/XP Pro

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\*1)Celeron-M 360J, Pentium-M 740, Pentium-M750, Pentium-M 770 \*2)NV44M, 915GM, 910GML \*3)15.4"WSXGA+(CB), 15.4"WXGA(HC) \*4)120GB, 100GB, 80GB, 60GB, 40GB \*5)512MB\*2, 256MB\*2, 256MB\*1

\*6)Celeron-M 370, Pentium-M 740, Pentium-M 750, Pentium-M 760, Pentium-M 770, Pentium-M780 \*7)NV44M, 915GM, 910GML \*8)120GB, 100GB, 80GB, 60GB, 40GB

\*9)1024\*1, 1024\*2, 512MB\*1, 512MB\*2, 256MB\*2, 256\*1 \*10)Combo, DVD +/-RW DL, DVD-ROM \*11) 802.11b/g, 802.11a/b/g

AM																						
	VGN-FS780	VGN-FS760	VGN-FS740	VGN-FS720	VGN-FS775P	VGN-FS745P	VGN-FS770	VGN-FS750P	VGN-FS730	VGN-FS715	VGN-FS742	VGN-FS710	VGN-FS770FG	VGN-FS750F	VGN-FS730F	VGN-FS715F	VGN-FS755FP	VGN-FS740FP	VGN-FS710FP	VGN-FS760Q	VGN-FS740Q	VGN-FS740Q
CPU	Pentium-M 750(Do1.86)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 760(Do2.0)	Pentium-M 740(Do1.73)	Pentium-M 750(Do1.86)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Celeron-M 370J(Do1.5)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Celeron-M 370J(Do1.5)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Celeron-M 370J(Do1.5)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	*6)
Graphic	NV44M	NV44M	915GM	915GM	NV44M	NV44M	915GM	915GM	915GM	915GM	915GM	910GML	915GM	915GM	915GM	910GML	915GM	915GM	910GML	NV44M	915GM	*7)
LCD	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)	15.4"WXGA (High Brightness)	15.4"WXGA (Clear Black)/(High Brightness)
HDD	120GB	100GB	80GB	60GB	100GB	80GB	100GB	100GB	80GB	60GB	80GB	100GB	100GB	100GB	80GB	60GB	100GB	80GB	60GB	100GB	80GB	*8)
MEMORY(Slot1)	512MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	*9)
MEMORY(Slot2)	512MB DDR333	-	256MB DDR333	256MB DDR333	512MB DDR333	-	512MB DDR333	-	256MB DDR333	256MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	256MB DDR333	512MB DDR333	256MB DDR333	
QUANTITY(STANDARD)	1GB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	1GB/2GB	512MB/2GB	1GB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	1GB/2GB	1GB/2GB	512MB/2GB	512MB/2GB	1GB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	
OPT-DRIVE	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	Combo	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	Combo	Combo	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL	Combo	Combo	DVD +/-RW DL	DVD +/-RW DL	*10)
AC adaptor	AC19V9	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V11	AC19V9	AC19V10	AC19V10	AC19V10	AC19V10	AC19V10	AC19V10	AC19V11	AC19V11	AC19V10
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	*11)
Memory Card Adapter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
USB FLOPPY DISK DRIVE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OS	XP Home	XP Home	XP Home	XP Home	XP Pro	XP Pro	XP Home	XP Pro	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Pro	XP Pro	XP Pro	XP Home	XP Home	XP Pro/XP Home

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- △[COR] The model that is accompanied by asterisk(\*) is the CTO model.  
For the equipment configuration, refer to the CTO Information.
- △[COR] The trademarks or registered trademarks of above ,refer to page2.

EU									
	VGN-FS315Z	VGN-FS395VP	VGN-FS315M	VGN-FS315B	VGN-FS315E	VGN-FS315SR	VGN-FS315MR	VGN-FS315H	VGN-FS315S
CPU	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Celeron-M 380(Do1.6)	Pentium-M 750(Do1.86)	Pentium-M 740(Do1.73)	Pentium-M 740(Do1.73)	Pentium-M 750(Do1.86)
Graphic	NV44M	NV44M	NV44M	915GM	910GML	NV44M	NV44M	NV44M	NV44M
LCD	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)
HDD	120GB	80GB	80GB	80GB	80GB	100GB	80GB	100GB	100GB
MEMORY(Slot1)	512MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333	256MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333	512MB DDR333
MEMORY(Slot2)	512MB DDR333	-	-	-	256MB DDR333	512MB DDR333	-	512MB DDR333	512MB DDR333
QUANTITY(STANDARD/MAX)	1GB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	512MB/2GB	1GB/2GB	512MB/2GB	1GB/2GB	1GB/2GB
OPT-DRIVE	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL	DVD+-RW DL
AC adaptor	AC19V9	AC19V11	AC19V11	AC19V11	AC19V11	AC19V12	AC19V12	AC19V11	AC19V11
Battery	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA	BP2SA
Wireless LAN	O	O	O	O	O	O	O	O	O
Memory Card Adapter	X	X	X	X	X	X	X	X	X
USB FLOPPY DISK DRIVE	X	X	X	X	X	X	X	X	X
OS	XP Home	XP Pro	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home	XP Home

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	AO									
	VGN-FS38C	VGN-FS35C	VGN-FS38GP	VGN-FS38SP	VGN-FS38LP	VGN-FS38TP	VGN-FS35GP	VGN-FS35SP	VGN-FS35LP	VGN-FS35TP
CPU	Pentium-M 760(Do2.0)	Pentium-M 750(Do1.86)	Pentium-M 770(Do2.13)	<-	<-	<-	Pentium-M 750(Do1.86)	<-	<-	<-
Graphic	NV44M	NV44M	NV44M	<-	<-	<-	NV44M	<-	<-	<-
LCD	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	15.4"WXGA (Clear Black)	<-	<-	<-	15.4"WXGA (High Brightness)	<-	<-	<-
HDD	80GB	60GB	100GB	<-	<-	<-	60GB	<-	<-	<-
MEMORY(Slot1)	512MB DDR333	256MB DDR333	512MB DDR333	<-	<-	<-	512MB DDR333	<-	<-	<-
MEMORY(Slot2)	-	256MB DDR333	-	<-	<-	<-	-	<-	<-	<-
QUANTITY(STANDARD/MAX)	512MB/2GB	512MB/2GB	512MB/2GB	<-	<-	<-	512MB/2GB	<-	<-	<-
OPT-DRIVE	DVD+-RW DL	Combo	DVD+-RW DL	<-	<-	<-	DVD+-RW DL	<-	<-	<-
AC adaptor	AC19V10	AC19V10	AC19V10	<-	<-	<-	AC19V10	<-	<-	<-
Battery	BP2SA	BP2SA	BP2SA	<-	<-	<-	BP2SA	<-	<-	<-
Wireless LAN	O	O	O	<-	<-	<-	O	<-	<-	<-
Memory Card Adapter	X	X	X	<-	<-	<-	X	<-	<-	<-
USB FLOPPY DISK DRIVE	X	X	X	<-	<-	<-	X	<-	<-	<-
OS	XP Home	XP Home	XP Pro	<-	<-	<-	XP Pro	<-	<-	<-

△[COR]

- The model that is accompanied by asterisk(\*) is the CTO model.  
For the equipment configuration, refer to the CTO Information.
- The trademarks or registered trademarks of above ,refer to page2.

1-2.CTO Information

Model name:VGN-FS92PS  
Model number:PCG-7D2N (W/ W-LAN), PCG-7D3N(W/O W-LAN)  
OS:WinXP Pro

CPU	Pentium-M 770 E-707-258-01 CPU PM 2.13	Pentium-M 750 E-707-258-01 CPU PM 1.86	Pentium-M 740 E-707-258-01 CPU PM 1.73	Celeron-M 360J E-708-557-01 CPU CEL-M 1.4		
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4"WSXGA+ClearBlack A-1133-850-A ASSY LCD (HC-SXGA+WLAN)(S)(W)	15.4"WXGA+ClearBlack A-1133-851-A ASSY LCD (HC-XGA-WLAN)(S)(W)	15.4"WSXGA+ClearBlack A-1127-878-A ASSY LCD (HC-SXGA+WLAN)(S)(G)	15.4"WXGA+ClearBlack A-1127-879-A ASSY LCD (HC-WXGA-WLAN)(S)(G)		
Graphics	NV44M	915GM	910GML			
Memory	256MB*1	256MB*2	512MB*2			Note: Refer to "M-1.Main Board" for part numbers.
Opt.Drive	Super Multi +/- DL A-1156-463-A ASSY ODD PANA(HMDL)(W)	Super Multi +/- DL A-1156-462-A ASSY ODD PANA(HMDL)(G)	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	Combo A-1127-957-A ASSY ODD QSI(SBW 243)(G)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(C2732)(W)	DVD-ROM A-1127-959-A ASSY ODD Toshiba(C2732)(G)
W-LAN	802.11b(g)(int)l 1-781-864-611-621-631-64 WIRELESS LAN CARD	802.11b(g)(Ambit) 1-789-014-221-23 WIRELESS LAN CARD	None			
Office	2003 Professional	None				
Other Option	Memory card adapter 1-478-615-11 MEMORY CARD ADAPTER					
CHASSIS COLOR	White	Gray				

Model name:VGN-FS92S  
Model number:PCG-7D2N (W/ W-LAN), PCG-7D3N(W/O W-LAN)  
OS:WinXP Home

CPU	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 750 E-707-258-01 CPU PM 1.86	Pentium-M 740 E-707-258-01 CPU PM 1.73	Celeron-M 360J E-708-557-01 CPU CEL-M 1.4		
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4"WSXGA+ClearBlack A-1133-850-A ASSY LCD (HC-SXGA+WLAN)(S)(W)	15.4"WXGA+ClearBlack A-1133-851-A ASSY LCD (HC-XGA-WLAN)(S)(W)	15.4"WSXGA+ClearBlack A-1127-878-A ASSY LCD (HC-SXGA+WLAN)(S)(G)	15.4"WXGA+ClearBlack A-1127-879-A ASSY LCD (HC-WXGA-WLAN)(S)(G)		
Graphics	NV44M	915GM	910GML			
Memory	256MB*1	256MB*2	512MB*2			Note: Refer to "M-1.Main Board" for part numbers.
Opt.Drive	Super Multi +/- DL A-1156-463-A ASSY ODD PANA(HMDL)(W)	Super Multi +/- DL A-1156-462-A ASSY ODD PANA(HMDL)(G)	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	Combo A-1127-957-A ASSY ODD QSI(SBW 243)(G)	DVD-ROM A-1127-958-A ASSY ODD Toshiba(C2732)(W)	DVD-ROM A-1127-959-A ASSY ODD Toshiba(C2732)(G)
W-LAN	802.11b(g)(int)l 1-781-864-611-621-631-64 WIRELESS LAN CARD	802.11b(g)(Ambit) 1-789-014-221-23 WIRELESS LAN CARD	None			
Office	2003 Personal	None				
Other Option	Memory card adapter 1-478-615-11 MEMORY CARD ADAPTER					
CHASSIS COLOR	White	Gray				

Model name:VGN-FS790P  
Model number:PCG-7D1L(802.11a/b/g),PCG-7D2L(802.11b/g)  
OS:WinXP Pro

CPU	Pentium-M 780 E-706-173-01 CPU PM 2.26	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.86	Pentium-M 740 E-707-256-01 CPU PM 1.73	Celeron-M 370J E-708-558-01 CPU CEL-M 1.5
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4WXGA/High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(W)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-WLAN)(S)(W)				
Graphics	NV44M	915GM	910GML			
Memory	1024MB*1	1024MB*2	256MB*1	256MB*2	512MB*1	512MB*2
Note: Refer to "M-1.Main Board" for part number						
Opt.Drive	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	DVD+RW A-1127-951-A ASSY ODD SONY(DVD+R)(RW)(W)	DVD-ROM A-1127-989-A ASSY ODD Toshiba(C2732)(W)	DVD+RW A-1152-205-A ASSY ODD Pioneer(DVD+R)(RW)(W)	DVD+RW A-1127-953-A ASSY ODD Pioneer(DVD+R)(RW)(W)	DVD+RW A-1152-207-A ASSY ODD PANA(DVD+R)(RW)(W)
W-LAN	802.11b(g)intnl 1-761-864-01 WIRELESS LAN CARD	802.11a/b/g 1-789-095-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS790B  
Model number:PCG-7D1L(802.11a/b/g),PCG-7D2L(802.11b/g)  
OS:WinXP Pro

CPU	Pentium-M 780 E-707-473-01 CPU PM 2.26	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.86	Pentium-M 740 E-707-238-01 CPU PM 1.73	Celeron-M 370J E-708-558-01 CPU CEL-M 1.5
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4WXGA/High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(W)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-WLAN)(S)(W)				
Graphics	NV44M	915GM	910GML			
Memory	1024MB*1	1024MB*2	256MB*1	256MB*2	512MB*1	512MB*2
Note: Refer to "M-1.Main Board" for part number						
Opt.Drive	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	DVD+RW A-1127-951-A ASSY ODD SONY(DVD+R,RW)(W)	DVD-ROM A-1127-989-A ASSY ODD Toshiba(C2732)(W)	DVD+RW A-1152-205-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1127-953-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1152-207-A ASSY ODD PANA(DVD+R,RW)(W)
W-LAN	802.11b(g)intnl 1-761-864-01 WIRELESS LAN CARD	802.11a/b/g 1-789-095-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS790  
Model number:PCG-7D1L(802.11a/b/g),PCG-7D2L(802.11b/g)  
OS:WinXP Home

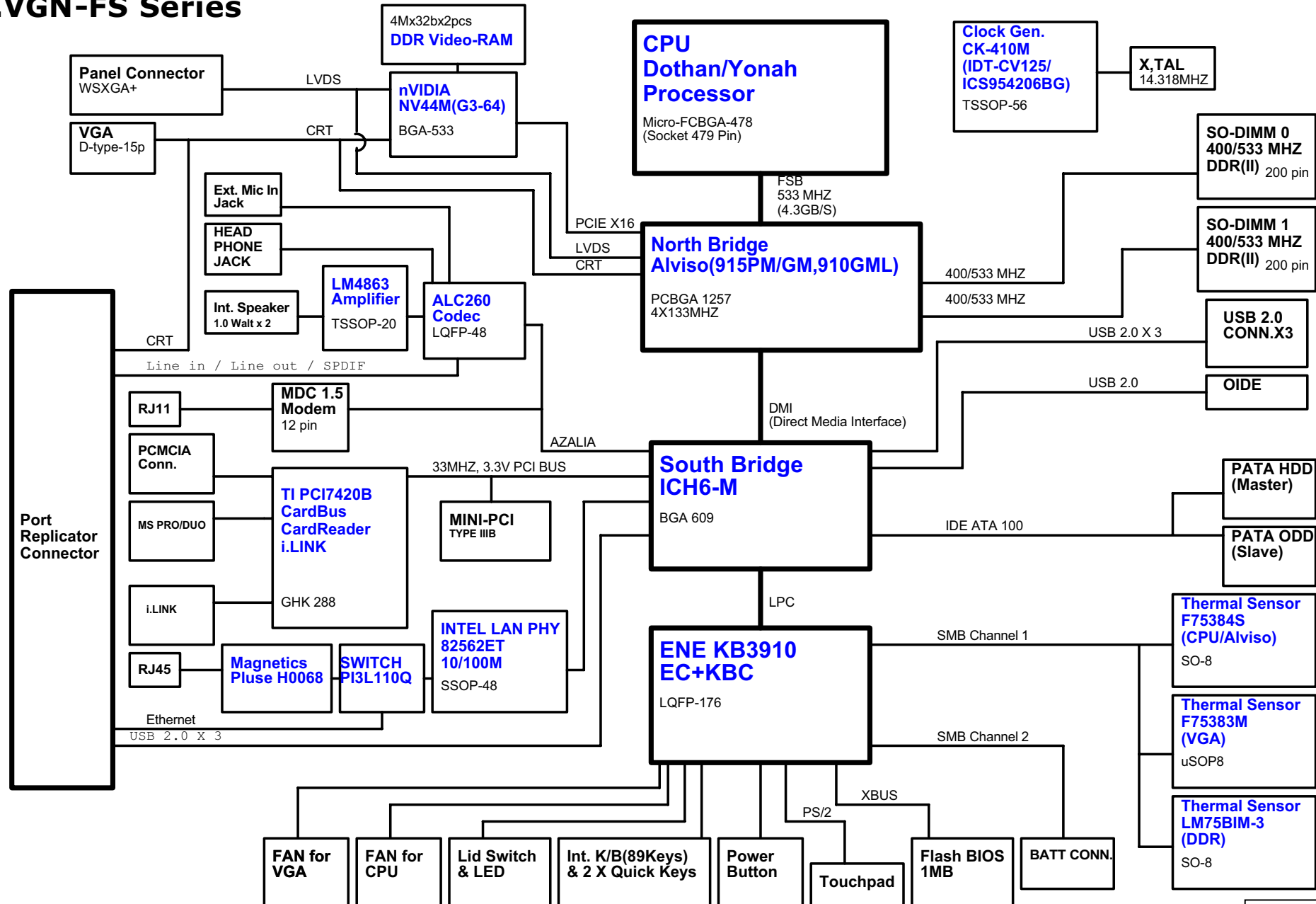
CPU	Pentium-M 780 E-707-473-01 CPU PM 2.26	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.86	Pentium-M 740 E-707-238-01 CPU PM 1.73	Celeron-M 370J E-708-558-01 CPU CEL-M 1.5
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4WXGA/High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(W)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-WLAN)(S)(W)				
Graphics	NV44M	915GM	910GML			
Memory	1024MB*1	1024MB*2	256MB*1	256MB*2	512MB*1	512MB*2
Note: Refer to "M-1.Main Board" for part numbers.						
Opt.Drive	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	DVD+RW A-1127-951-A ASSY ODD SONY(DVD+R,RW)(W)	DVD-ROM A-1127-989-A ASSY ODD Toshiba(C2732)(W)	DVD+RW A-1152-205-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1127-953-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1152-207-A ASSY ODD SONY(DVD+R,RW)(W)
W-LAN	802.11b(g)intnl 1-761-864-01 WIRELESS LAN CARD	802.11a/b/g 1-789-095-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

Model name:VGN-FS790BH  
Model number:PCG-7D1L(802.11a/b/g),PCG-7D2L(802.11b/g)  
OS:WinXP Home

CPU	Pentium-M 780 E-707-473-01 CPU PM 2.26	Pentium-M 770 E-707-261-01 CPU PM 2.13	Pentium-M 760 E-707-260-01 CPU PM2.0	Pentium-M 750 E-707-259-01 CPU PM 1.86	Pentium-M 740 E-707-238-01 CPU PM 1.73	Celeron-M 370J E-708-558-01 CPU CEL-M 1.5
HDD	120GB ASSY HDD 120GB	100GB ASSY HDD 100GB	80GB ASSY HDD 80GB	60GB ASSY HDD 60GB	40GB ASSY HDD 40GB	Note: Refer to "H-1.HDD" for part numbers.
LCD	15.4WXGA/High Brightness A-1133-649-A ASSY LCD (BR-WLAN)(Q)(S)(W)	15.4WXGA/ClearBlack A-1133-651-A ASSY LCD (HC-WLAN)(S)(W)				
Graphics	NV44M	915GM	910GML			
Memory	1024MB*1	1024MB*2	256MB*1	256MB*2	512MB*1	512MB*2
Note: Refer to "M-1.Main Board" for part number						
Opt.Drive	Combo A-1127-956-A ASSY ODD QSI(SBW 243)(W)	DVD+RW A-1127-951-A ASSY ODD SONY(DVD+R,RW)(W)	DVD-ROM A-1127-989-A ASSY ODD Toshiba(C2732)(W)	DVD+RW A-1127-989-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1127-953-A ASSY ODD Pioneer(DVD+R,RW)(W)	DVD+RW A-1152-207-A ASSY ODD SONY(DVD+R,RW)(W)
W-LAN	802.11b(g)intnl 1-761-864-01 WIRELESS LAN CARD	802.11a/b/g 1-789-095-51 WIRELESS LAN CARD				
CHASSIS COLOR	White					

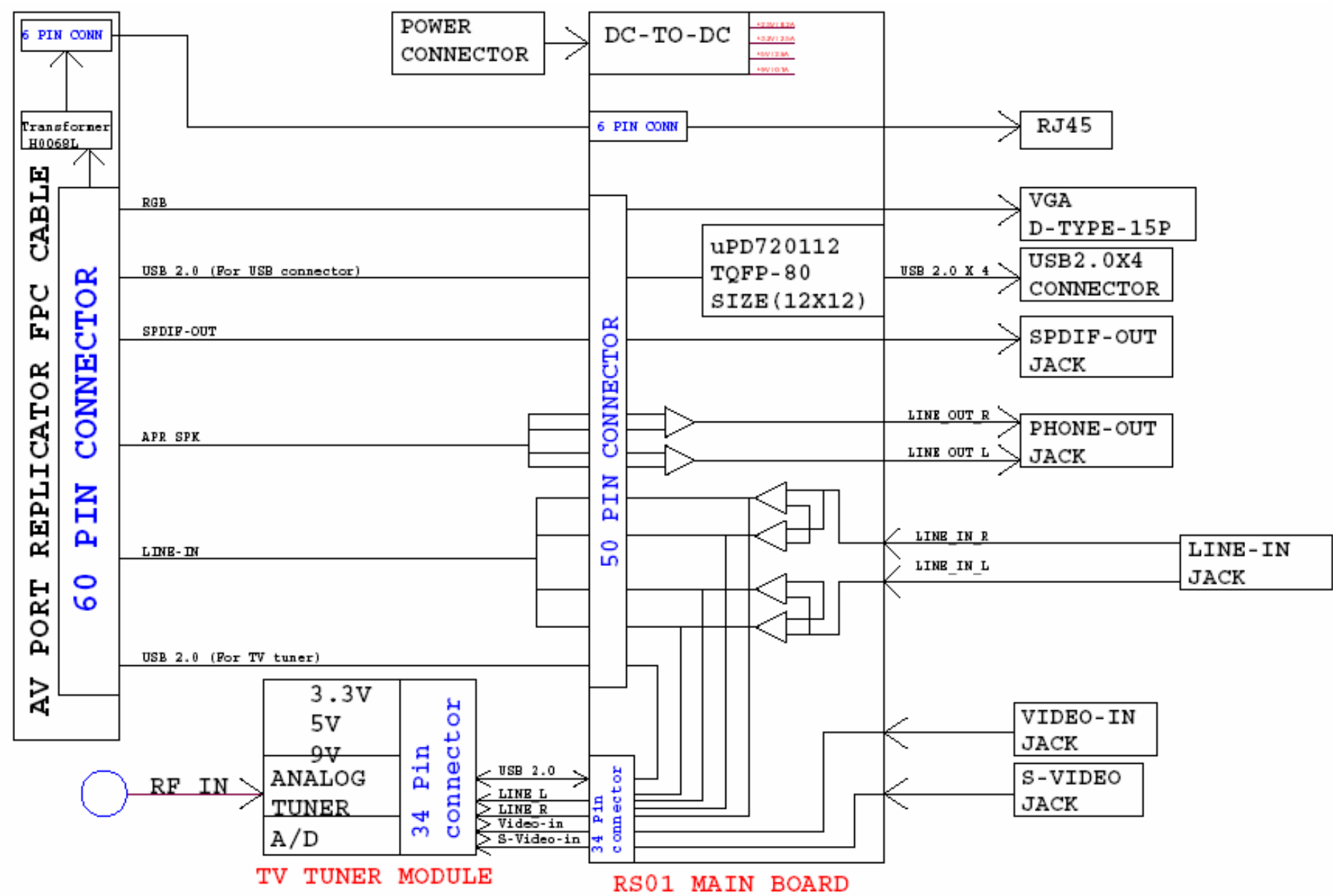
# CHAPTER2. BLOCK DIAGRAM

## 2-1.VGN-FS Series



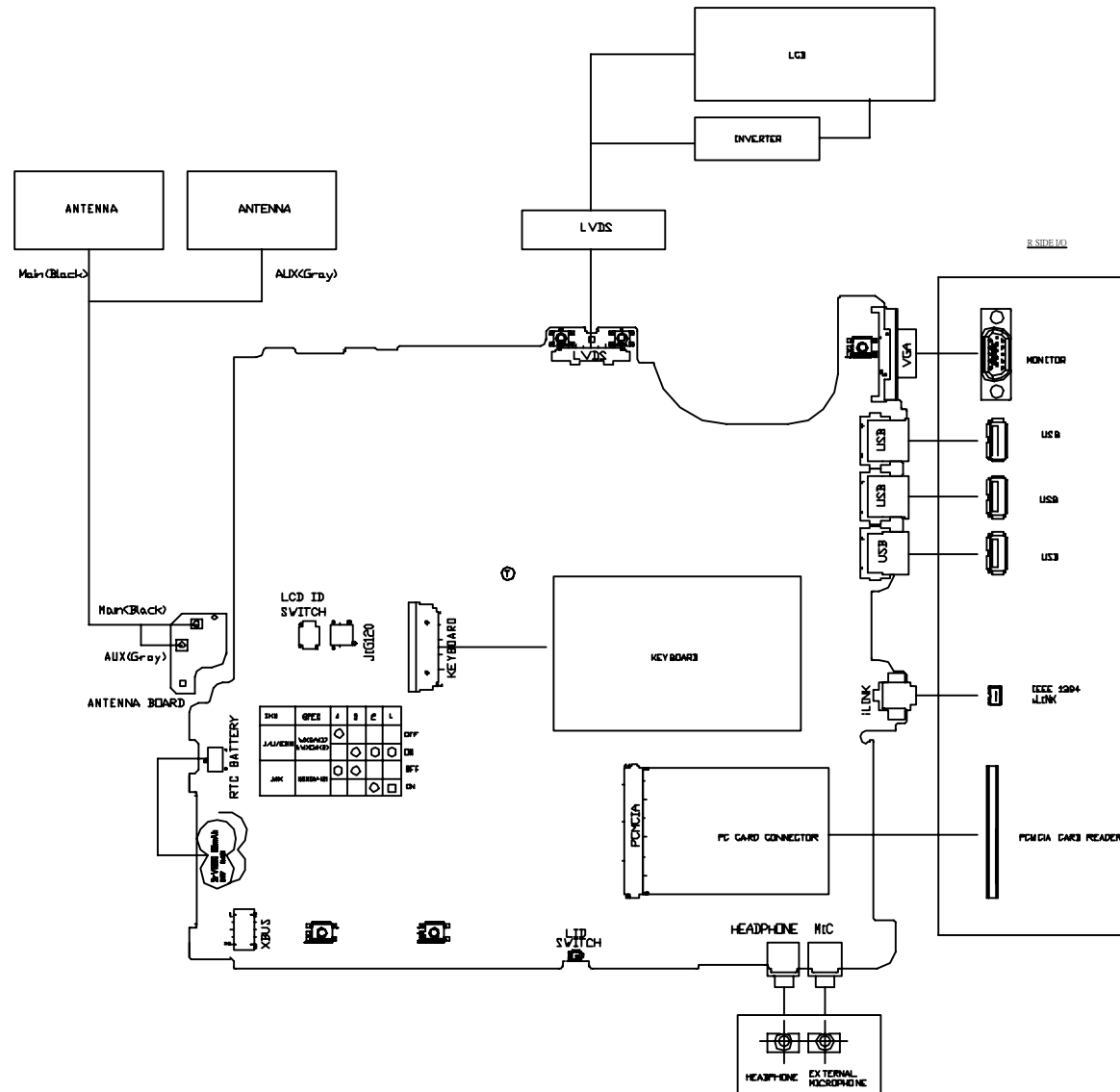


2-2. Port Replicator (VGP-PRFS10V)

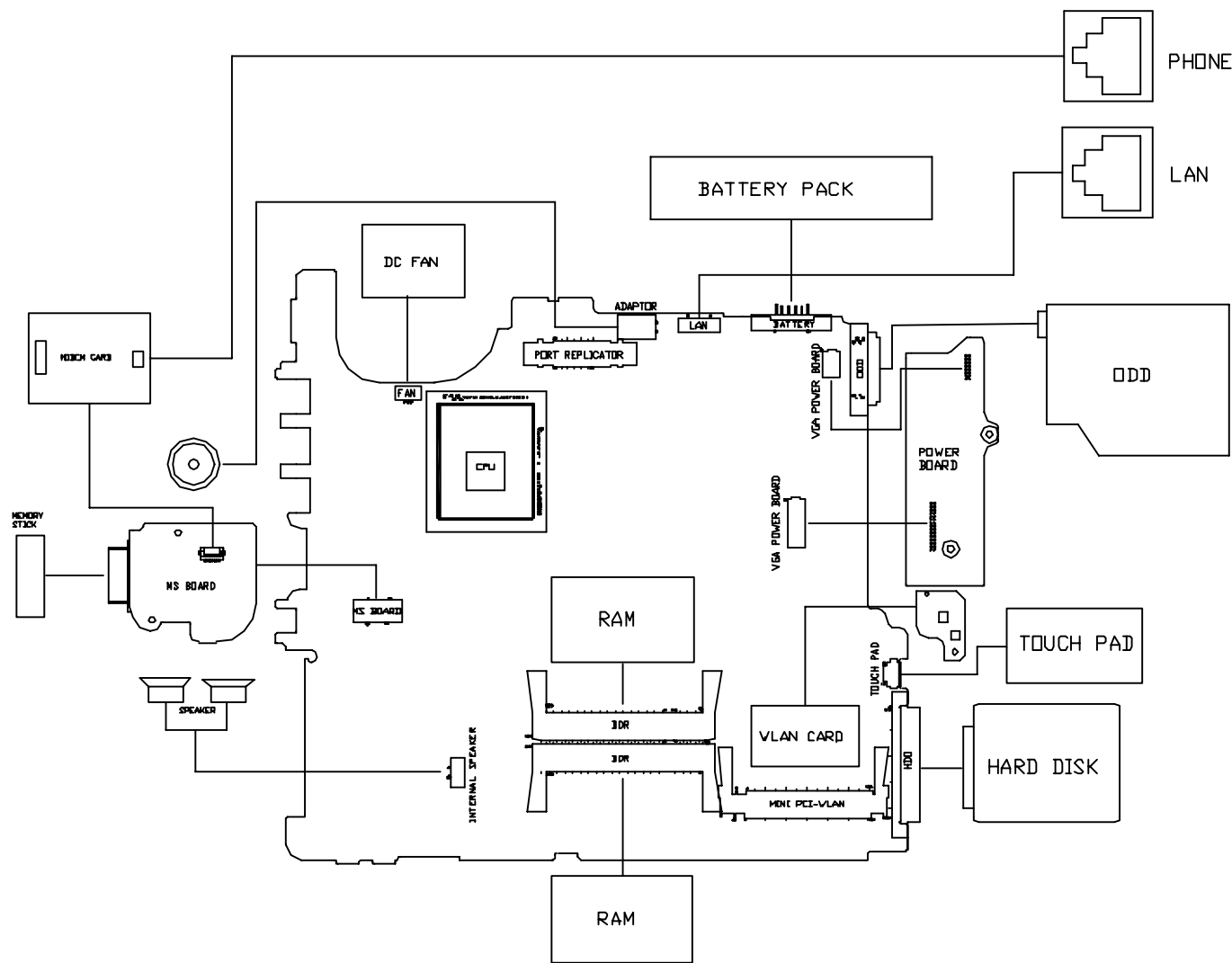


# CHAPTER3. FRAME HARNESS DIAGRAM

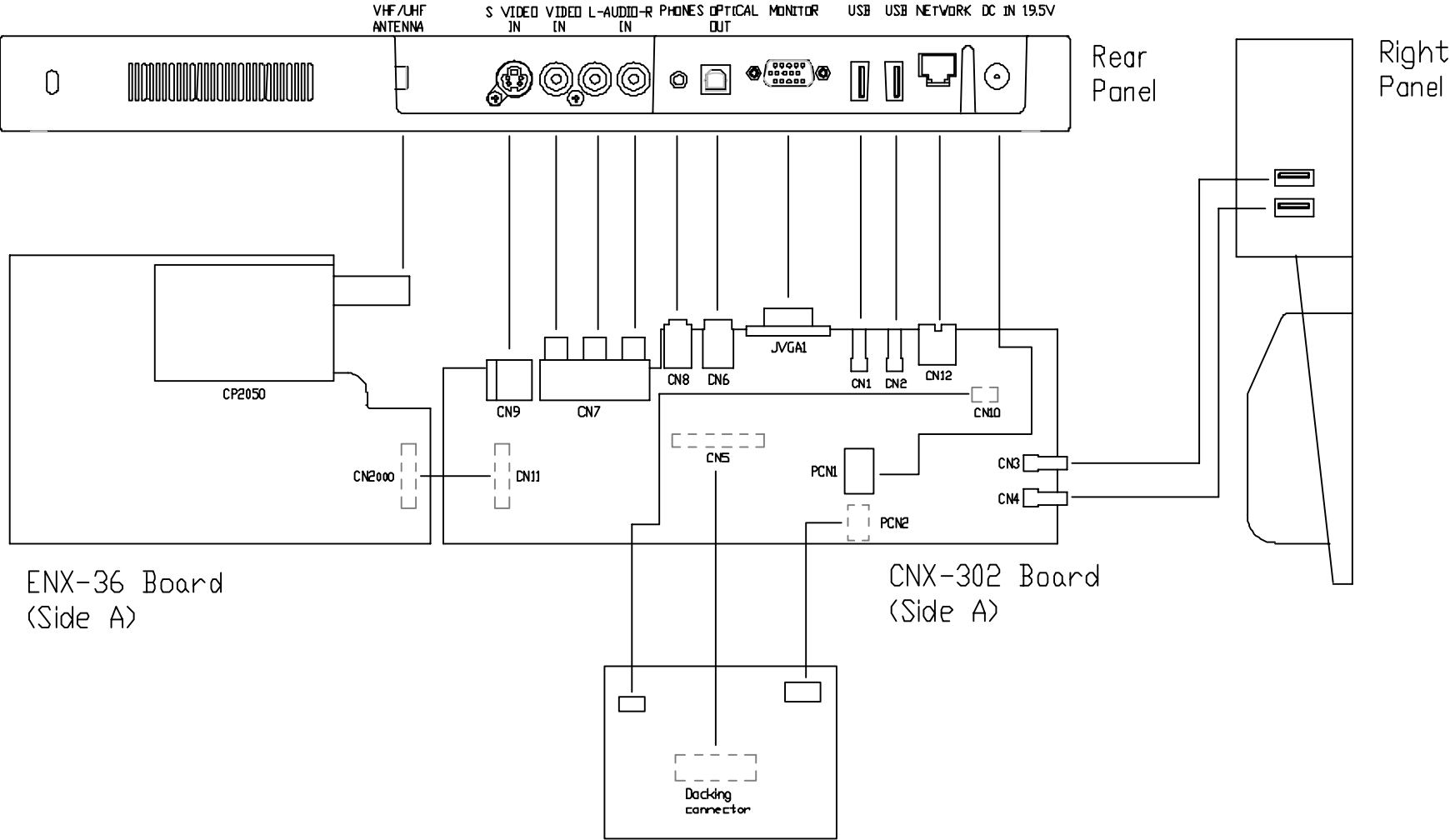
## 3-1 VGN-FS Series (TOP)



3-1 VGN-FS Series (BOTTOM)



### 3-2 Port Replicator (VGP-PRFS10V)



# CHAPTER 4

## EXPLODED VIEWS AND PARTS LIST

· The parts id compiled by blocks of a Palmrest and bottom etc.  
The sections of the parts list are different depending on the model.  
Please refer to list of contents shown in the below.

### Section Page

#### Screws

S-1.Screws..... 4-2

#### Palmrest

P-1.Palmrest..... 4-3

#### Main Board

M-1.Main Board..... 4-5

#### BOTTOM

B-1.BOTTOM..... 4-7

#### CABINET KBCOVER

C-1.CABINET KBCOVER..... 4-9

#### LCD

L-1.LCD..... 4-10

#### ODD

D-1.ODD ..... 4-13

#### HDD

H-1.HDD..... 4-14

#### ACCESSORIES

A-1.ACCESSORIES..... 4-15

A-2.ACCESSORIES..... 4-18



#### SUBSTITUTION PARTS LIST

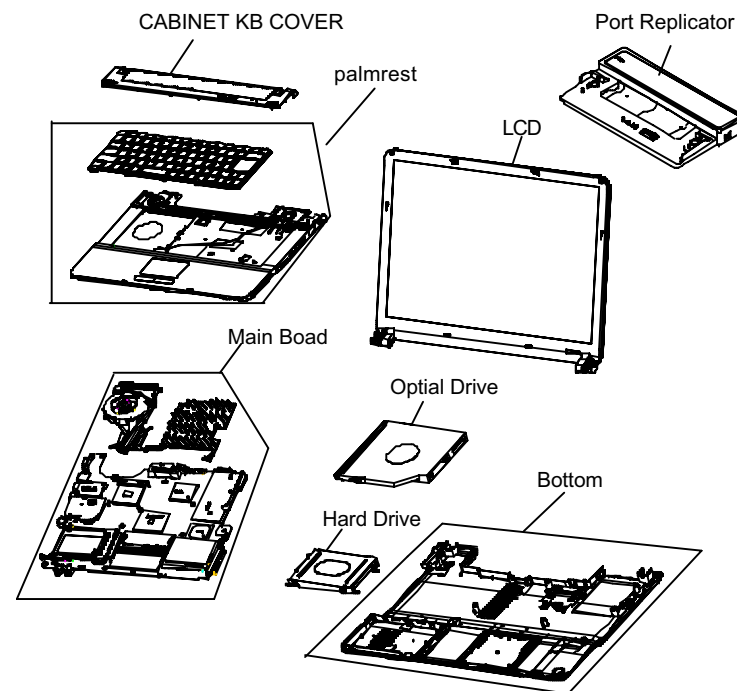
T-1.SUBSTITUTION PARTS LIST..... 4-20

**DIP Switch**..... 4-22

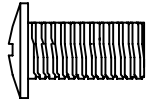






#### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- When two or more parts are shown, use the part described first as the main part.
- The parts marked "&" are the "Customer Replacable Parts(CRP)" that can be replaced by Filed Customer Support. Especially the parts with the <&> mark require the special attention to use them. Here fore, check first whether the desired part is one of the targetted parts of the Customer Replacable Parts(CRP), or the non-targetted parts by referring to the exploded view.

The components identified by mark  or dotted line with mark  are critical for safely.  
Replace only with part number specified.

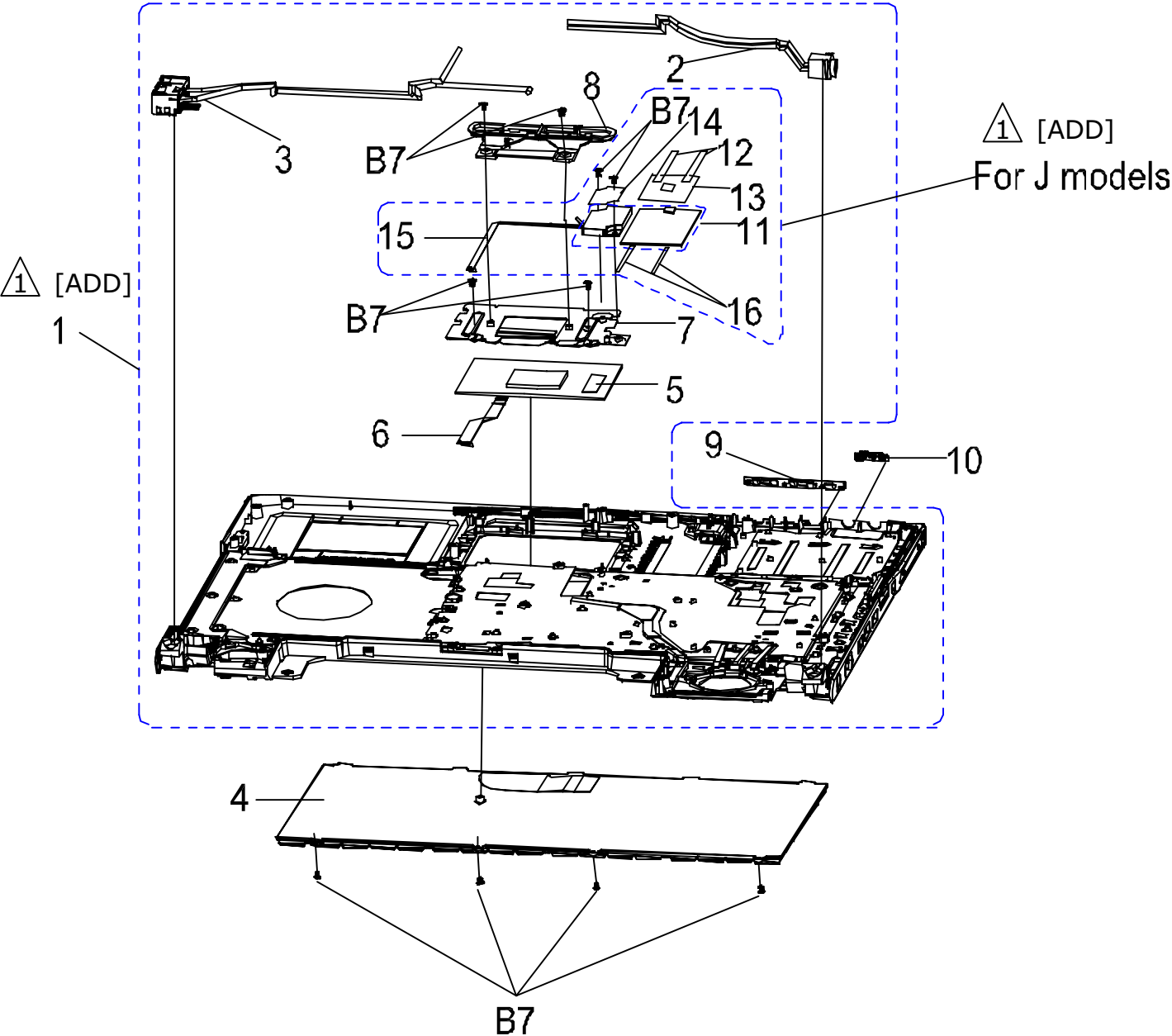


S-1. SCREWS

B1	B2	B3	B4	B5	B6	B7
						
M3*6	M2*1.6	M2*7	M2*5	M3*3	M2*2	M2*3
Black	Black	Black	Silver	Silver	Silver	Black

<u>Ref.No.</u>	<u>Part No</u>	<u>Description</u>
B1	4-654-811-01	SCREW M3
B2	2-582-816-01	APPEARANCE SCREW M2
B3	2-590-600-01	SCREW (M2), EXTERIOR VIEW
B4	4-645-214-61	GRIP, M2
B5	4-673-018-02	SCREW, SPECIAL HEAD
B6	4-671-538-01	SCREW, SPECIAL HEAD
B7	4-672-836-01	SCREW, M2 SPECIAL HEAD, EG GRIP

P-1. Palmrest



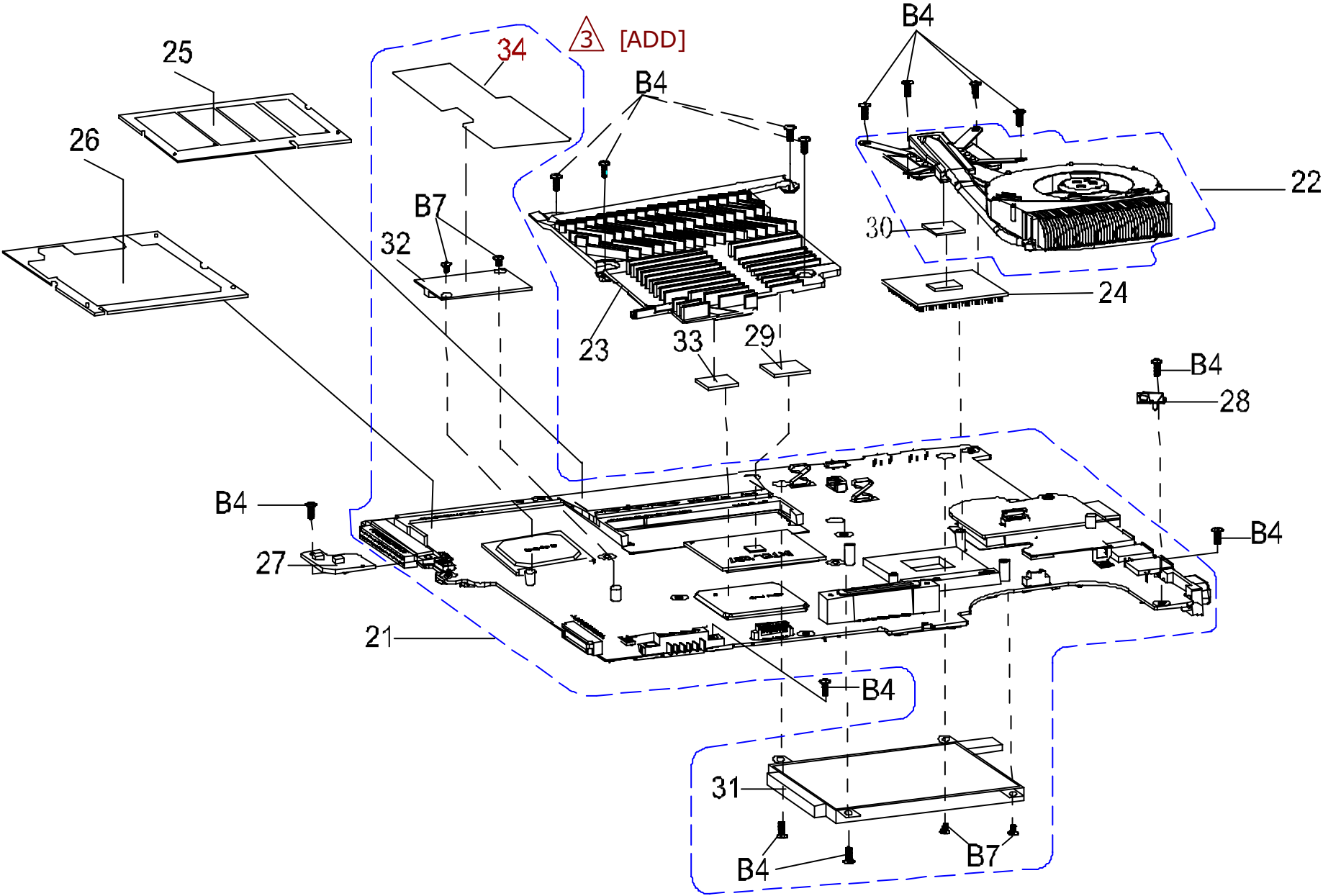
**P-1**

[illegible]



# M-1. Main Board

M-1



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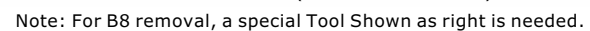
**M-1**

3 [ADD]

[illegible]

2  
[MA]

**B-1**

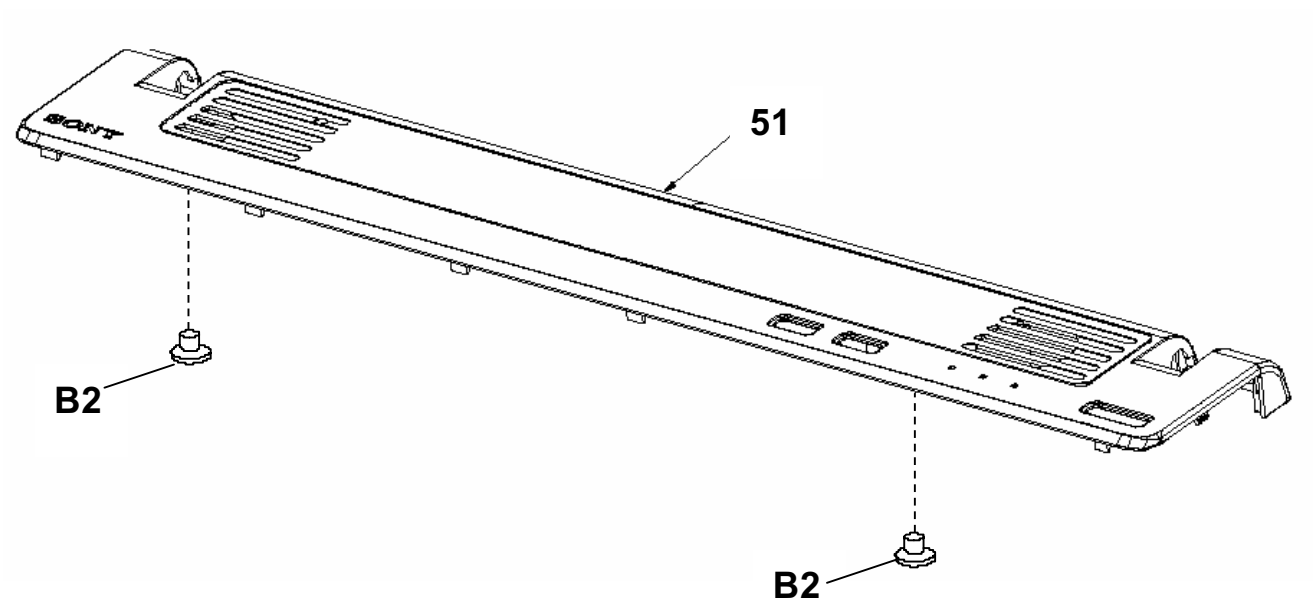


## B-1

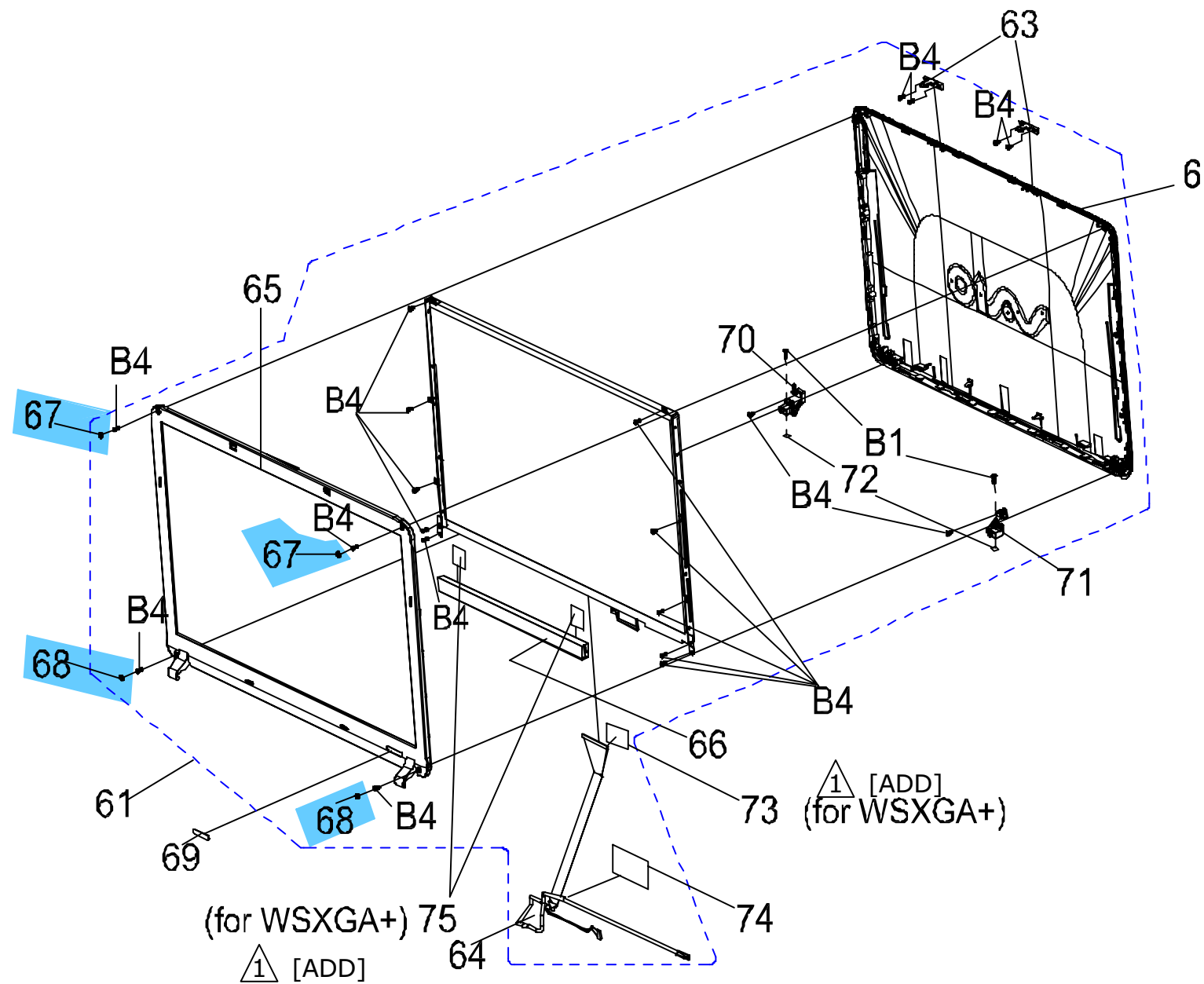
[illegible]
$$\frac{\Delta}{[MA]}$$

C-1. CABINET KBCOVER

C-1



<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>
51	X-2102-593-1	MS02 ASSY CABINET KBCOVER
B2	2-582-816-01	APPEARANCE SCREW M2



**L-1**

Type QDI (rear view)

$$\begin{array}{c} \triangle \\ 2 \\ \text{[MA]} \end{array}$$

[illegible]

2  
[MA]



<u>Ref.No.</u>	<u>Part No.</u>
----------------	-----------------

### Description



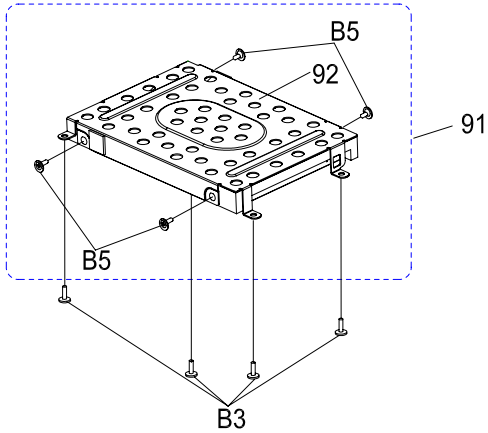
2  
[MA]

# H-1.HDD

Ref.No.	Part No.
---------	----------

### Description

92	A-1092-487-A	MS01 SUBASSY HDD BRACKET
B3	2-590-600-01	SCREW (M2), EXTERIOR VIEW
B5	4-673-018-02	SCREW, SPECIAL HEAD



\*: CTO Model

[illegible]
$$\begin{array}{c} \triangle 2 \\ \text{[MA]} \end{array}$$
$$\frac{\Delta}{[MA]}$$

# A-1. ACCESSORIES

A-1

2001  
Memory Card Adapter



2006  
AC Adapter



2031  
SPEAKER



2035  
RAY-CATCHER



2004  
Floppy Disk Drive



2007  
Battery Pack



2032  
Adapter, AC (SPEAKER)



2036  
REMOTE COMMANDER



2005  
Power Cord



2030  
Port Replicator



2034  
CORD, POWER (SPEAKER)



2037  
RFCORD WITH F TERMINAL



Refer to A -2 . Accessories

- 1) The Ref. 2030-2037 are included only in the models supplied with the Port Replicator.

# A-1

Sony Confidential






# A-1

Diagram illustrating the structure of the  $\mathbf{MA}$  matrix, showing two columns labeled  $\mathbf{MA}$  and  $\mathbf{MA}$ , with corresponding rows labeled  $\mathbf{MA}$  and  $\mathbf{MA}$ .

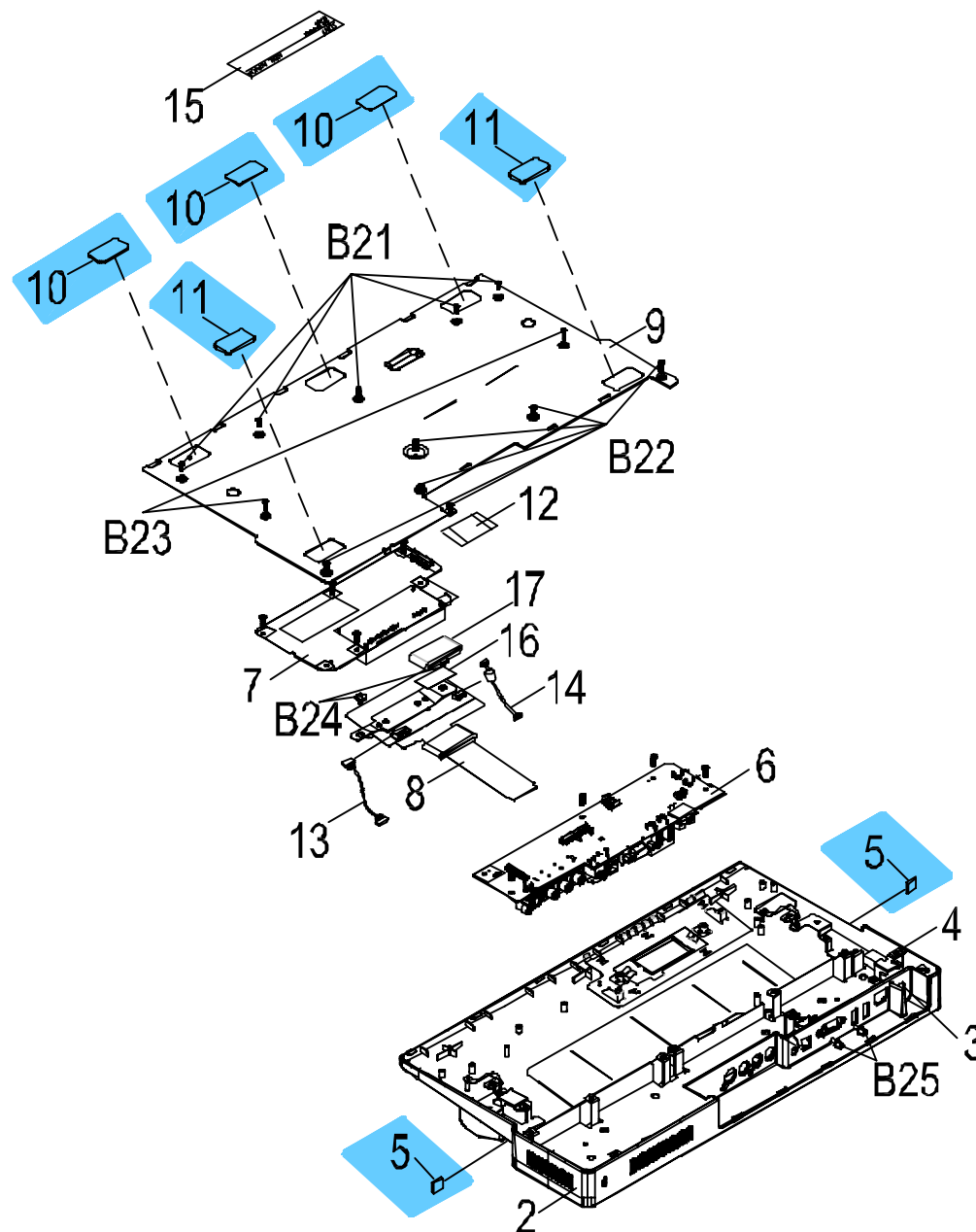
# A-2. ACCESSORIES

A-2

B20

B21	M3*8
	Black
B22	M2*6
	Black
B23	M2*8
	Black
B24	M3*5
	Black
B25	M2*2
	Silver

Note: Screw are supplied with B20,a whole set



**A-2**

The diagram shows two identical springs, each labeled with a triangle containing the number 2 and the text [MA] below it. These two springs are connected in parallel to a single horizontal bar, which represents the load.

The diagram shows two identical springs, each labeled with a triangle containing the number 2 and the text [MA] below it. These two springs are connected in parallel to a single horizontal bar, which represents the load.

# T-1

Please order below substitution parts if the parts with the same Ref. No. in page 4-2 to 4-17 are not available.

[illegible]
























































**T-1**

[illegible]
$$\frac{[MA]}{[MA]_0}$$

# [CHG] **DIP Switch**

The DIP switch setting is following table.

J	VGN-FS52B 	VGN-FS22B 	VGN-FS32B 	VGN-FS22VB 	VGN-FS92S 	VGN-FS92PS*/FS92S* 		
AM	VGN-FS780 	VGN-FS760P 	VGN-FS740  (QDI) (CPT)	VGN-FS720  (QDI) (CPT)	VGN-FS775P 	VGN-FS745P 	VGN-FS770 	15.4inch WSXGA +(HC) 
	VGN-FS750P 	VGN-FS730  (QDI) (CPT)	VGN-FS715  [MA]  (QDI) (CPT)	VGN-FS742 	VGN-FS710  [MA]  (QDI) (CPT)	VGN-FS770FG 	VGN-FS750F  (QDI) (CPT)	15.4inch WXGA(HC) 
	VGN-FS730F  (QDI) (CPT)	VGN-FS715F  (QDI) (CPT)	VGN755FG  (QDI) (CPT)	VGN-FS740FP  (QDI) (CPT)	VGN-FS710FP  (QDI) (CPT)	VGN-FS740 	 (QDI) (CPT)	
	VGN-FS790P*/FS790B*/FS790*/FS790BH*  (QDI) (CPT)							15.4inch WXGA(QDI) 
EU	VGN-FS315Z 	VGN-FS395VP 	VGN-FS315M 	VGN-FS315B 	VGN-FS315E 	VGN-FS315SR 	VGN-FS315MR 	
	VGN-FS315H 	VGN-FS315S 						15.4inch WXGA(CPT) 
AO	VGN-FS3RC 	VGN-FS35C 	VGN-FS38GP 	VGN-FS38SP 	VGN-FS38LP 	VGN-FS38TP 	VGN-FS35GP  (QDI) (CPT)	
	VGN-FS35SP  (QDI) (CPT)	VGN-FS38LP 	VGN-FS38TP 					Note: When replacing LCD from CPT to QDI, please change the DIP switch from 15.4inch WXGA(CPT) to 15.4inch WXGA (QDI).

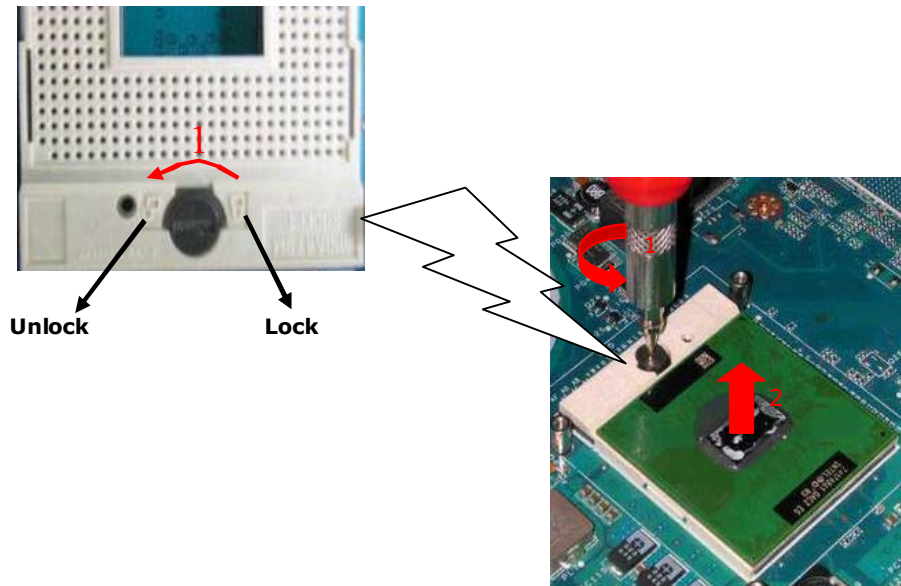
The DIP switch setting is different depending the types of LCD.  
Set the DIP switch of CTO model in accordance with the [FOR CTO MODEL].

## CHAPTER 5. OTHERS

### 5-1.Replacing the CPU

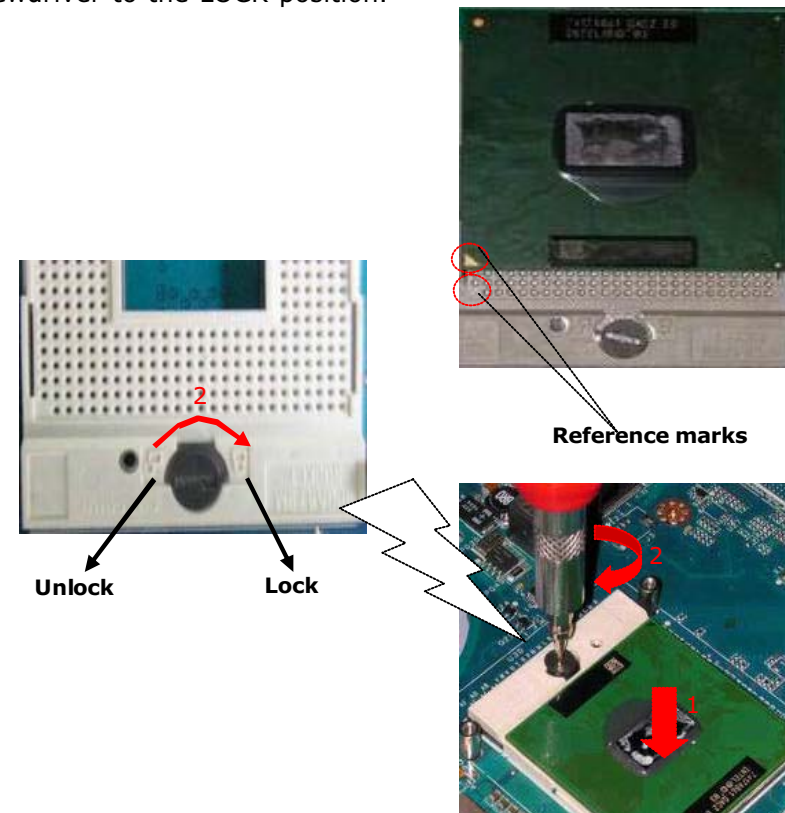
#### 1. Removing the CPU

1. Insert a flat-blade screwdriver into the notch as shown illustration and rotate it so that the protrusion comes to the lock release position.
2. Pull the CPU gently upward to lift it out of the CPU socket



#### 2. Installing the CPU

1. Align the triangle reference mark of the mark the CPU with that of the CPU socket and insert all the pins of the CPU to the corresponding holes of the CPU socket.
2. Insert the flat head (-) screwdriver into the specified position and rotate the screwdriver to the LOCK position.



## 5-2. Wiring the W-LAN Cable

\* The MS02 PWA ANTENNA is installed also in the models without Wireless LAN.  
Refer to the instruction below to see how to wire the CABLE.






Using KAPTION TAPE to secure the Cable.



VGN- FS52B/FS22B/FS32B/FS22VB/FS92S/FS92PS/FS92S (J)  
VGN- FS780/FS760/FS740/FS720/FS775P/FS745P/FS770/FS750P/FS730/FS715/FS742/FS710/FS770FG/FS750F/ FS730F/FS715F/FS755FP/FS740FP/FS710FP/FS760Q/FS740Q/FS790P/FS790B/FS790/FS790BH (AM)  
VGN- FS315Z/FS395VP/FS315M/FS315B/FS315E/FS315SR/FS315MR/FS315H/FS315S (EU)  
VGN- FS38C/FS35C/FS38GP/FS38SP/FS38LP/FS38TP/FS35GP/FS35SP/FS35LP/FS35TP (AO)

## List of VGN-F Series (As of Nov, 2005 )

Service Manual		Model Name														
Part No.	J			AM				EU			AO					
9-876-414-XX	VGN-FS70B	VGN-FS20		VGN-FS570	VGN-FS540P	VGN-FS500	*	VGN-FS550F	VGN-FS195XP	VGN-FS115M	VGN-FS115B	VGN-FS18CP	VGN-FS18SP	VGN-FS15GP	VGN-FS15TP	
	VGN-FS50B	VGN-FS90PS	*	VGN-FS550	VGN-FS530B	VGN-FS500P	*		VGN-FS115Z	VGN-FS115E	VGN-FS115ZR	VGN-FS15C	VGN-FS18LP	VGN-FS15SP		
	VGN-FS30B	VGN-FS90S	*	VGN-FS550P	VGN-FS520B	VGN-FS500B	*		VGN-FS115S	VGN-FS195VP	VGN-FS115MR	VGN-FS18GP	VGN-FS18TP	VGN-FS15LP		
9-876-425-XX	VGN-FS71B	VGN-FS21		VGN-FS680	VGN-FS645P	VGN-FS640FP	VGN-FS690	*	VGN-FS295XP	VGN-FS215MR		VGN-FS28C	VGN-FS28TP			
	VGN-FS51B	VGN-FS91PS	*	VGN-FS660P	VGN-FS670FG	VGN-FS610FP			VGN-FS215Z	VGN-FS285M		VGN-FS25C	VGN-FS25GP			
	VGN-FS31B	VGN-FS91PSY	*	VGN-FS660	VGN-FS650F	VGN-FS620P			VGN-FS215M	VGN-FS285B		VGN-FS28GP	VGN-FS25SP			
	VGN-FS21B	VGN-FS91S	*	VGN-FS640	VGN-FS630F	VGN-FS620			VGN-FS295VP	VGN-FS285E		VGN-FS28SP	VGN-FS25LP			
				VGN-FS675P	VGN-FS615F	VGN-FS630			VGN-FS215B	VGN-FS215S		VGN-FS28LP	VGN-FS25TP			
				VGN-FS635B	VGN-FS640Q	VGN-FS690P	*		VGN-FS215E	VGN-FS285H						
				VGN-FS625B	VGN-FS655FP	VGN-FS690B	*		VGN-FS215SR							
9-876-443-XX	VGN-FS52B	VGN-FS92S		VGN-FS780	VGN-FS750P	VGN-FS730F	VGN-FS790P	*	VGN-FS315Z	VGN-FS315SR		VGN-FS38C	VGN-FS38TP			
	VGN-FS22B	VGN-FS92PS	*	VGN-FS760	VGN-FS730	VGN-FS715F	VGN-FS790B	*	VGN-FS395VP	VGN-FS315MR		VGN-FS35C	VGN-FS35GP			
	VGN-FS32B	VGN-FS92S	*	VGN-FS740	VGN-FS715		VGN-FS755FP	VGN-FS790	*	VGN-FS315M	VGN-FS315H		VGN-FS38GP	VGN-FS35SP		
	VGN-FS22VB			VGN-FS720	VGN-FS742	VGN-FS740FP	VGN-FS790BH	*	VGN-FS315B	VGN-FS315S		VGN-FS38SP	VGN-FS35LP			
				VGN-FS775P	VGN-FS710		VGN-FS710FP		VGN-FS315E			VGN-FS38LP	VGN-FS35TP			
				VGN-FS745P	VGN-FS770FG	VGN-FS760Q										
				VGN-FS770	VGN-FS750F	VGN-FS740Q										

 \*: CTO Model  
 : Additional Model

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2005KF00-1

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# Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver.1	2005.09.16	First Edition	
-02	Ver.2	2005.10.03	① Page1-1,Page1-2, Page4-3, Page4-4, Page4-6, Page4-8, Page4-10, Page4-11, Page4-14, Page4-16, Page4-17, Page4-20, Page4-21, Page4-22	N2005_052CK
-03	Ver.3	2005.10.11	② Front Page (Model Line Up), Page1-1, Page4-4,Page4-6,Page4-8,Page4-11, Page4-12,Page4-13,Page4-14,Page4-16, Page4-17,Page4-19,Page4-20,Page4-21, Page4-22,Back Cover	N2005_053AK
-04	Ver.4	2005.11.16	③ Page4-4,Page4-5,Page4-6,Page4-17, Page4-20	N2005_068CK
<Remarks>				